

REMARKS

The enclosed is responsive to the Examiner's Final Office Action mailed on August 13, 2004 and is being filed pursuant to a Request for Continued Examination (RCE) as provided under 37 CFR 1.114. Applicant respectfully requests reconsideration of this application. Claims 9 and 17-21 have been canceled. No claims have been added. Claims 1-14 and 22 have been amended to more properly define preexisting claim limitations and are supported by the specification.

Drawings

Figure 6 of the drawings has been amended to illustrate a "monitoring subsystem 626" which, as recited in the specification, "may reside on the load balancer module 625." Page 12, lines 12-13. The specification has been updated with the new reference number for the monitoring subsystem. No new matter has been added.

In addition, the term "root splitter reassignment logic" has been changed to "agent" in the claims to maintain consistency between the claims and the drawings. The agent 641 is illustrated on the leaf splitter 631 in Figure 6.

Finally, Claim 1 has been changed back to a system claim, to indicate that the redirection subsystem need not be included within the "intermediate" POP site 620 shown in Figure 6.

Thus, for the foregoing reasons, Applicant respectfully submits that the drawing objections have been overcome.

Claim Rejections 35 USC § 112

Claims 1, 11, 17, and 22 have been “rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.”

Applicant respectfully submits that the present set of claims overcome the rejection under § 112. Claim 1, for example, recites an agent (641) which operates to reconfigure a backup leaf splitter (631) as a primary root splitter. The specification provides a detailed description of how this reconfiguration process operates for both a RealPlayer streaming format (see, e.g., page 14, line 8 through page 15, line 2) and a Windows Media Technologies streaming format (see, e.g., page 15, line 3 through page 16, line 12). From this description it can be seen that when the backup leaf splitter is reconfigured as the new primary root splitter, it then takes the place of the old primary root splitter and splits the stream received from the data center 220. Given the fact that all of the leaf splitters 631-635 and the root splitter 630 are communicatively coupled together on the network at the POP site 620 (see, e.g., page 6, lines 3-9), once the backup leaf splitter is reconfigured, it can readily take the place of and perform the functions of the old primary root splitter.

Thus, Applicant respectfully submits that the claims are allowable under 35 USC § 112.

Rejections Under 35 U.S.C. § 103(a)

Claims 1, 11, 17, and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,665,726 B1 of Leighton et al. (“Leighton”) in view of U.S. Patent No. 6,292,905 B1 of Wallach et al. (“Wallach”).

Leighton discloses a system for performing fault-tolerant media streaming over a network. However, the system described in Leighton achieves fault tolerance using substantially different techniques than those claimed herein. Specifically, in Leighton, a plurality of “concentrators” receive a plurality of independent media streams from upstream splitters. As described in Leighton,

. . . a given concentrator receives two copies of the source signal from at least two different splitters. The concentrators process the incoming streaming signal copies, for example, by merging them into a single or composite copy of the original source signal according to a given processing algorithm. Thus, preferably a given concentrator receives streams from multiple sources, removes duplicate packets, and then outputs a single stream. The output of a given concentrator may then be fed into a splitter, with the process then being repeated if desired to make an arbitrary large number of copies of the signal. At the end of the replication process, the output of a splitter or a concentrator is fed directly or indirectly to an end user. The replication process is fault-tolerant, and thus the end user's signal is not interrupted regardless of signal or equipment problems within the distribution mechanism.

Thus, the system in Leighton achieves fault tolerance by providing each concentrator with multiple sources for each stream. If a first upstream source goes down the concentrator can still receive the stream from a second upstream source. However, Leighton does not teach or suggest reconfiguring a downstream or “leaf” splitter as a backup to a primary root splitter as recited in the present set of claims.

Wallach discloses general techniques for achieving fault tolerance within a computer network. Specifically, Wallach generally discloses a system a primary server and a dedicated secondary server. The secondary server is “in a constant state of readiness to take over” for the primary server. Providing a dedicated backup server is quite different from reconfiguring a leaf splitter to perform the operations of a root

splitter upon detecting a problem with the root splitter, as recited in the present set of claims.

Claims 2-10, 12-16, 18-21, and 23-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Leighton in view of Wallach and further in view of U.S. Patent No. 6,112,239 A of Kenner et al. (“Kenner”). Kenner discloses the use of “an intelligent mirroring scheme . . . used to determine the need for and distribution of mirror sites and to direct user requests for certain Web content to an optimum mirror site.” Kenner, column 5, lines 8-11. A redirection server is used to identify the “optimum” mirror site in response to a client request. Column 15, lines 32-35. However, Kenner does not teach or suggest reconfiguring a leaf splitter to perform the operations of a root splitter upon detecting a problem with the root splitter, as recited in the present set of claims.

Thus, for all of the foregoing reasons, Applicant respectfully submits that the present set of claims are allowable under 35 USC § 103.

CONCLUSION


Applicant respectfully submits that the rejections have been overcome by the amendments and remarks, and that the pending claims are in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the pending claims be allowed.

If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 6. This sheet, which includes Fig. 6, replaces the original sheet.

Attachment:

Replacement Sheet

Annotated Sheet Showing Changes

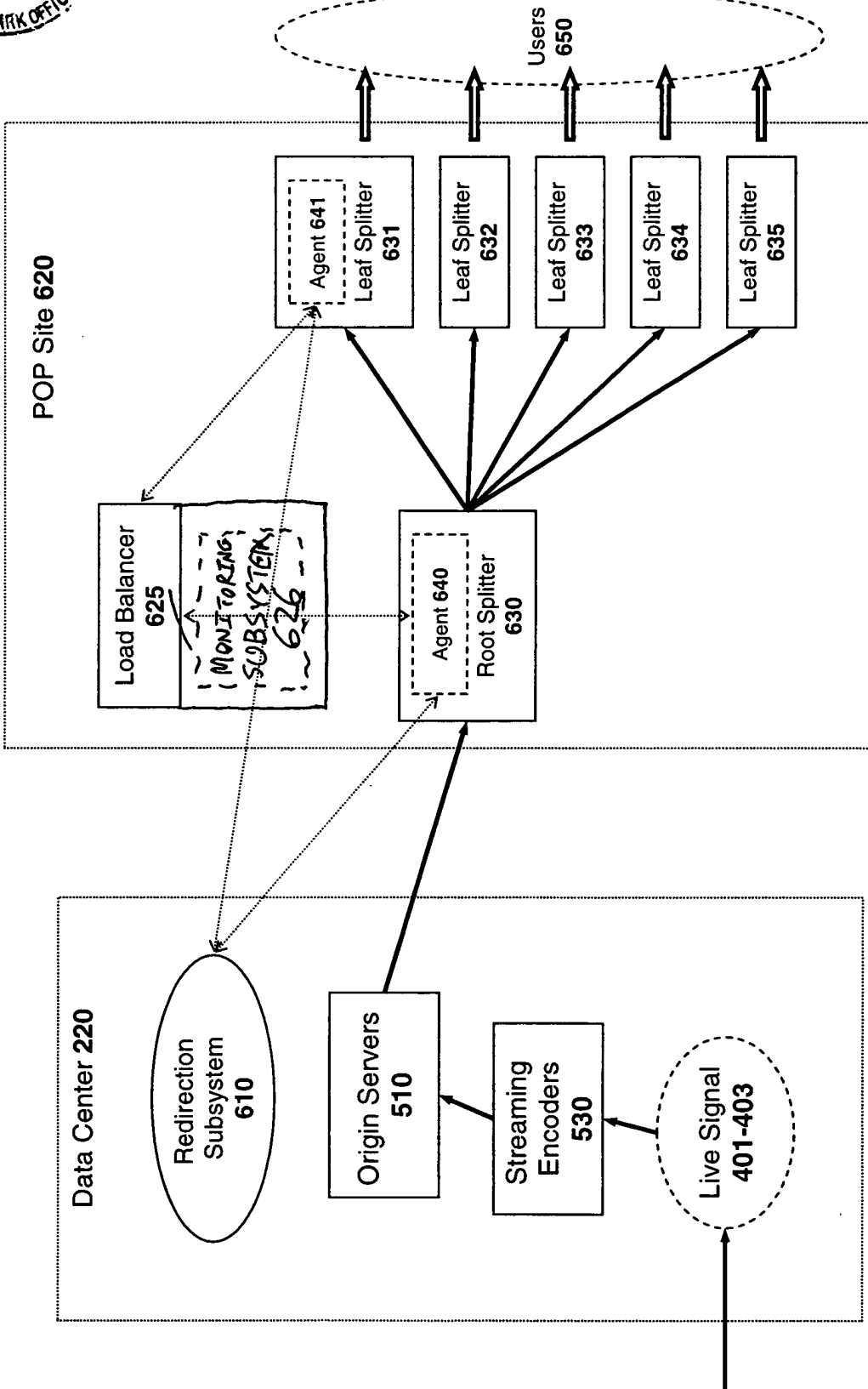


FIG. 6